IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Appellant(s):		Pan	Examiner:	Sefcheck
Serial No.	:	09/638,373	Group Art No.:	2662
Filed	:	August 15, 2000		
Atty Docket	:	120-296		
Title	:	Method and Apparatus for Implementing A Policy-Based Management System on a Network Device		

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APPELLANT'S BRIEF PURSUANT TO 37 C.F.R. § 1.192

This Appellant's brief is hereby submitted in accordance with a Notice of Appeal filed on October 30, 2006.

I. Real Party in Interest

The real party in interest is Nortel Networks, Limited.

II. Related Appeals and Interferences

Appellants are not aware of any appeals or interferences that are related to the present case.

III. Status of the Claims

This is an appeal brief from a decision dated August 3, 2006, finally rejecting all the claims currently pending in the present application. No claims have been allowed. The currently pending claims are 1-6, 9-12, 14-20, 23-26, 28-34, 37-40, and 42-47. Claims 7, 8, 13, 21, 22, 27, 35-36 and 41 were previously cancelled without prejudice.

The rejections of claims 1-6, 9-12, 14-20, 23-26, 28-34, 37-40, and 42-47 are the subject of this appeal.

A notice of Appeal was filed on October 30, 2006.

IV. Status of Amendments

No amendments to the claims were filed after the Final Rejection of August 3, 2006.

V. Summary of Claimed Subject Matter

The subject matter of independent claims 1, 15, 29 and 43 is directed to allocating resources on a network, and includes receiving a request for reservation of network resources, the reservation including a destination address on the network and a future activation time at which the resources are to be activated, as supported by disclosures in the Specification including step 40 of Fig. 3, Fig. 6A, step 52 of Fig. 12, step 68 of Fig. 13, lines 3-5 on page 2, lines 1-2 on page 3, lines 1-3 and 20-23 on page 6, and lines 1-3 on page 7. Claims 1, 15, 29 and 43 also set forth allocating resources on network devices on a path to the destination address to accommodate the reservation if the network devices have sufficient resources to accommodate the reservation, wherein the allocating is at the future activation time, and wherein the allocating includes communicating over the network at the future activation time with at least one policy enforcement point, as supported by disclosures in the Specification including steps 46, 48 and 50 of Fig. 3, lines 5-8 on page 2, lines 10-12 on page 3, line 14 on page 12 through line 3 on page 13, lines 19-22 on page 13, and at line 3 on page 24 through line 3 on page 25.

Claims 1, 15, 29 and 43 further set forth that the policy enforcement point is on the path and at an edge of the network, that the communicating includes configuring the at least one policy enforcement point by installing, at the future activation time, at least one internet protocol traffic filter in the policy enforcement point, that the installing activates the requested reservation of network resources for the destination address on the network, that the internet

protocol traffic filter includes a matching criteria and an action, that the matching criteria includes at least one internet protocol network address, and that the matching criteria allows the policy enforcement point to identify at least one packet and to perform the action on the packet, as supported by disclosures in the Specification including step 80 of Fig. 10, lines 21-22 of page 2, lines 2-3 of page 3, line 8 on page 22 through line 4 on page 23, line 15 through 19 on page 25, and lines 17 through 21 on page 26.

The subject matter of claims 2, 16 and 30 determines if the network devices on the path to the destination address have sufficient resources to accommodate the reservation, as supported by disclosures in the Specification including step 48 of Fig. 3, step 72 of Fig. 13, lines 8-9 on page 12, lines 11-21 on page 16, and lines 8-16 on page 18.

The subject matter of claims 3, 17 and 31 constructs a map of a topology of the network, and stores the map in memory, wherein the determining and the allocating of preceding claims are performed by referencing the map, as supported by disclosures in the Specification including lines 11-15 on page 2, lines 10-14 on page 14, and lines 7-9 on page 21.

The subject matter of claims 4, 18 and 32 sets forth that the constructing of the map is performed periodically to account for changes in the topology of the network, as supported by disclosures in the Specification including lines 14-15 on page 2.

The subject matter of claims 5, 19 and 33 includes determining if the reservation is permitted based on an identity of a transferor, and wherein the

allocating of the resource is performed if it is determined that the reservation is permitted, as supported by disclosures in the Specification including step 44 of Fig. 3, step 54 of Fig. 12, lines 16-19 on page 2, page 8 lines 1-4, lines 1-2 on page 12, and lines 14-22 on page 15.

The subject matter of claims 6, 20 and 34 sets forth that the allocating is not performed if it is determined that the reservation is not permitted, as supported by disclosures in the Specification including step 64 of Fig. 12, page 2 lines 19-21, and lines 17-21 on page 16.

The subject matter of claims 9, 23 and 37 sets forth that the allocating includes allocating resources on the network devices for different classes of service on the network, as supported by disclosures in the Specification including lines 3-7 on page 3 and lines 14-16 on page 7.

The subject matter of claims 10, 24 and 38 sets forth that the different classes of service are defined in data packets to be transmitted over the network, as supported by disclosures in the Specification including lines 18-21 on page 7.

The subject matter of claims 11, 25 and 39 sets forth that the resources include bandwidth of devices on the network, as supported by disclosures in the Specification including line 21 of page 4 through line 1 of page 5.

The subject matter of claims 12, 26 and 40 determines if the destination address is along a path having greater than a predetermined amount of bandwidth, and sets forth that the allocating of resources is performed based on such determining, as supported by disclosures in the Specification including line 18 on page 17 through line 16 on page 18.

The subject matter of claims 14, 28 and 42 sets forth that communicating over the network with the at least one policy enforcement point at the activation time takes place using the COPS/RSVP protocol, as supported by disclosures in the Specification including page 3 lines 12-15, and page 6 lines 10-14.

The subject matter of claim 44 sets forth that the action performed by the policy enforcement point includes marking a packet header of the packet to assign a predetermined priority to the packet, as supported by disclosures in the Specification including page 26 lines 6-8 and line 21.

The subject matter of claim 45 sets forth that the action performed by the policy enforcement point includes shaping the packet, as supported by disclosures in the Specification including page 26 lines 6-8 and line 21.

The subject matter of claim 46 sets forth that the action performed by the policy enforcement point includes dropping the packet, as supported by disclosures in the Specification including page 26 lines 6-8 and line 21.

The subject matter of claim 47 includes modifying the matching criteria of the internet protocol traffic filter by replacing the at least one internet protocol network address with a range of internet protocol network addresses, as supported by disclosures in the Specification including page 27 line 12 through line 16 on page 28.

VI. Grounds of Rejection to be Reviewed on Appeal

A. Claims 1-6, 9, 11, 12, 15-20, 23, 25, 26, 29-34, 37, 39, 40 and 43-46 stand rejected as obvious under 35 U.S.C. 103 over the combination of United

States Patent 5,687,167A of Bertin et al. ("Bertin et al.") with United States Patent 6,771,661B1 of Chawla et al. ("Chawla et al.").

B. Claims 10, 14, 24, 28, 38 and 42 stand rejected as obvious under 35 U.S.C. 103 over the combination of Bertin et al., Chawla et al., and United States Patent 6,459,682B1 of Ellesson et al. ("Ellesson et al.").

C. Claim 47 stands rejected for obviousness under 35 U.S.C. 103(a) over the combination of Bertin et al. and Chawla et al., and United States Patent 6,785,728 of Schneider et al. ("Schneider et al.").

VII. Argument

A. The Examiner has failed to establish a *prima facie* case of obviousness under 35 U.S.C. 103 in the rejection of claims 1-6, 9, 11, 12, 15-20, 23, 25, 26, 29-34, 37, 39, 40 and 43-46 using the combination of United States Patent 5,687,167A of Bertin et al. ("Bertin et al.") with United States Patent 6,771,661B1 of Chawla et al. ("Chawla et al.").

To establish *prima facie* obviousness of a claimed invention, all the claim limitations must be taught or suggested by the prior art. *In re Royka*, 490 F.2d 981, 180 USPQ 580 (CCPA 1974). "All words in a claim must be considered in judging the patentability of that claim against the prior art." *In re Wilson*, 424 F.2d 1382, 1385, 165 USPQ 494, 496 (CCPA 1970). Appellants assert that while Bertin et al. generally discloses bandwidth reservations in the context of connection requests, and while Chawla et al. teaches modifying session

bandwidth at a given time, the combination of Bertin et al. and Chawla et al., includes no disclosure or suggestion of any system or method for allocating resources on a network, including installing, ***at the future reservation time***, at least one internet protocol traffic filter in the policy enforcement point, wherein the installing activates the requested reservation of network resources for the destination address on the network, ***wherein the internet protocol traffic filter includes a matching criteria and an action, wherein the matching criteria includes at least one internet protocol network address, and wherein the matching criteria allows the policy enforcement point to identify at least one packet and to perform the action on the packet***, as in the present independent claims 1, 15, 29 and 43.

United States Patent 5,687,167A of Bertin et al. ("Bertin et al."):

Bertin et al. discloses that connection level controls, including bandwidth allocation, may be applied at connection set up time. See column 2, lines 21-44. Bertin et al. further discloses that a user specified connection request may include data flow characteristics such as a bit rate (column 12, lines 64-67), and that bandwidth request messages may be used in a bandwidth reservation process at the time a connection is set up (column 13, lines 1-17 and 30-62). In column 6, lines 5-26, Bertin et al. discloses that optimum route calculations may be performed to minimize the amount of network resources used to complete a communication path, and that network topology information is updated, by means of control messages, when new links are activated or new nodes added to the

network ("dynamic network reconfigurations").

United States Patent 6,771,661B1 of Chawla et al. ("Chawla et al."):

Chawla et al. discloses a system and method which enable a data communications device to be programmed to automatically and dynamically modify allocation of resources upon the occurrence of specific events or times without having to break an active communication session. Resource allocations in Chawla et al. can be made by bandwidth reservations provided to a data communications device via a network policy or via individual bandwidth reservation messages. The bandwidth allocation information of Chawla et al. can specify a session of data communication and future bandwidth modification information, such as a time or event, that will cause the data communications device to modify an amount of bandwidth reserved for the specified session of data communications.

A data communications device in Chawla et al. receives bandwidth allocation information indicating future bandwidth allocation modification information associated with a session of data communication. The data communications device of Chawla et al. then determines a future event upon the occurrence of which the data communications device modifies an amount of bandwidth allocated to the session of data communication. The future event can be determined based upon the future bandwidth allocation modification information and event information such as a time signal from a clock or another event signal. The data communications device of Chawla et al. can detect the occurrence of the future event in the data communications device and in response to detecting its occurrence, can modify the amount of bandwidth allocated to the session of data communications in the data communications device.

i. Claims 1-6, 9, 11, 12, 15-20, 23, 25, 26, 29-34, 37, 39, 40 and 43:

Each of the present independent claims 1, 15, 29 and 43 include the limitation of installing, ***at the future reservation time***, at least one ***internet protocol traffic filter*** in the policy enforcement point, wherein the installing activates the requested reservation of network resources for the destination address on the network, ***wherein the internet protocol traffic filter includes a matching criteria and an action, wherein the matching criteria includes at least one internet protocol network address, and wherein the matching criteria allows the policy enforcement point to identify at least one packet and to perform the***

action on the packet. Appellants respectfully submit that the combination of Bertin et al. and Chawla et al. lacks any disclosure or suggestion of such a feature.

In contrast to the specific features of the present independent claims highlighted above, Bertin et al. teaches bandwidth reservation in general, performed at the time a connection is set up. This general teaching is expressly described by Bertin et al. in the section entitled "Call Set Up" beginning at line 20 of column 2, which states "Bandwidth allocation is accomplished by noting, at the connection set up time, the "equivalent capacity" loading that the new connection will generate . . . ". See also column 13, lines 1-17 and 30-62 of Bertin et al.

The teachings of Bertin et al. regarding dynamic network topology reconfiguration in column 6 relate to updating network topology information through control messages in response to new links being activated or new nodes being added to the network.

Chawla et al. describes only bandwidth reservation messages with future bandwidth allocation modification information associated with a data communication session. In contrast to the above highlighted filter installation features in the present independent claims, Chawla et al. describes storing bandwidth allocation information in ***a resource allocation table*** (see column 8, lines 51-53) that is accessible by a bandwidth reservation processor (see Fig. 5). The discussion beginning at line 19 of column 17 regarding the bandwidth labeler 423 shown in Fig. 5 in Chawla et al. states only that the bandwidth labeler 423 can "appropriately reserve, modify, and un-reserve bandwidth resources (i.e., queue space, processor resources, as so forth) within the data transporter 450 at

the appropriate time or on the occurrence of one or more events". Accordingly, nothing in the combination of Bertin et al. or Chawla et al. discloses or suggests installing any kind of internet protocol filter ***at a future reservation time***, far less the specific installation of an ***internet protocol filter that includes a matching criteria including at least one internet protocol network address and action allowing a policy enforcement point to identify at least one packet and to perform the action on the packet***, as in the present independent claims.

In the Response to Arguments section of the Final Office Action, the Examiner stated as follows:

> . . . Bertin reads on the Applicants claimed "filters" by disclosing "connection reservations" that are applied (installed) to each node (policy enforcement point) along the path of the network (Internet), in response to "connection requests". While Bertin does not explicitly disclose this process as "installing filters" on the network devices, the actions that constitute filter installation as defined by Applicant's disclosure are met. The meaning of words used in a claim is not construed in a lexicographic vacuum but in the context of the specification and drawings. . .

In view of the above statement, Applicants respectfully submit that the Examiner has taken Applicants' Specification as a guide for interpreting the teachings of the prior art such that the actual teaching of Bertin et al. is modified to read on the present independent claims. In the Examiner's analysis, it is not the meaning of the present claims that is being interpreted in view of Applicants' Specification, but rather the teachings of the prior art.

Specifically, the only teaching related to the above highlighted limitations of the independent claims cited by the Examiner are within the Applicants' Specification. The "connection reservations" of Bertin et al. include no specific

teaching of how the bandwidth reservation is made in connection requests. Applicants note that the specific, explicitly set forth structure of the claimed filters - "***wherein the internet protocol traffic filter includes a matching criteria and an action, wherein the matching criteria includes at least one internet protocol network address***" - is not present in Bertin et al. or Chawla et al., and is completely ignored in the Examiner's Response to Arguments. Similarly, the operation based on the claimed filters - "***wherein the matching criteria allows the policy enforcement point to identify at least one packet and to perform the action on the packet***" - is also not addressed. Accordingly, the limitations of the present independent claims, which include installing, at the future reservation time, at least one such internet protocol traffic filter in the policy enforcement point, are not taught or suggested by the combination of Bertin et al. and Chawla et al., and the Examiner cannot remedy this shortcoming of the prior art by identifying portions of the Applicants' Specification that describe the possibility of bandwidth reservation, or of checking for the availability of bandwidth to be reserved. Moreover, Applicants respectfully urge that the rejections must be based on the content of the prior art, and not Applicants' own teaching in the Specification of the application.

While the Applicants' Specification does indicate that bandwidth reservation is a problem that may be solved through an embodiment of the present invention, the present claims indicate a specific manner in which that problem is solved. The Examiner is citing the fact the Bertin et al. teaches bandwidth reservation to reject the specific manner in which the present independent claims

operate to install specific types of filters. The Examiner is accordingly excluding the presently claimed invention from protection because it solves a problem that is also solved in Bertin et al. Applicants' respectfully urge that such a rejection is improper, since it fails to give consideration to all the limitations of the present independent claims. Applicants respectfully urge that a teaching of reserving bandwidth in some unspecified way, as in Bertin et al., does not disclose or suggest the installation of an internet protocol traffic filter, as in the present independent claims.

ii. Claims 44-46:

The above described deficiencies of the Bertin et al. and Chawla et al. combination stand in even starker contrast to the features set forth in dependent claims 44-46. Each of these dependent claims sets forth a specific action enabled by the installation of the filter at the future reservation time. Claim 44 indicates that the action enabled by the filter installation at the future time includes marking a packet header of a received packet to assign a predetermined priority to the packet, claim 45 indicates that the action includes shaping the packet, and claim 46 indicates that the action includes dropping the received packet. Since the teachings of Bertin et al. and Chawla et al. do not include or suggest the installation of the claimed filters at a future reservation time at all, they are even further removed from any teaching regarding enabling the performance of the specific actions recited in claims 44-46 through such future time filter installation.

For the above reasons, the combination of Bertin et al. and Chawla et al.

does not disclose or suggest all the features of the present independent claims 1, 15, 29, and 43, from which claims 2-6, 9, 11, 12, 16-20, 23, 25, 26, 30-34, 37, 39, 40 and 44-46 depend. Accordingly, the combination of Bertin et al. and Chawla et al. does not form a *prima facie* case of obviousness under 35 U.S.C. 103 with respect to the present independent claims 1, 15, 29 and 43, and dependent claims 2-6, 9, 11, 12, 16-20, 23, 25, 26, 30-34, 37, 39, 40 and 44-46 are believed to be patentable over the combination of Bertin et al. and Chawla et al. for at least the same reasons.

B. The Examiner has failed to establish a *prima facie* case of obviousness under 35 U.S.C. 103(a) in the rejection of claims 10, 14, 24, 28, 38 and 42 based on the combination of Bertin et al., Chawla et al., and United States Patent 6,459,682B1 of Ellesson et al. ("Ellesson et al.").

As noted above, in order to establish *prima facie* obviousness of a claimed invention, all the claim limitations must be taught or suggested by the prior art. Appellants have argued above that the combination of Bertin et al. with Chawla et al. does not disclose or suggest the claimed limitations of the present independent claims 1, 15, and 29, which provide installing, ***at the future reservation time***, at least one ***internet protocol traffic filter*** in the policy enforcement point, wherein the installing activates the requested reservation of network resources for the destination address on the network, ***wherein the internet protocol traffic filter includes a matching criteria and an action, wherein the matching criteria***

includes at least one internet protocol network address, and wherein the matching criteria allows the policy enforcement point to identify at least one packet and to perform the action on the packet. Applicants now respectfully urge that the addition of Ellesson et al. to the combination of Bertin et al. and Chawla et al. does not remedy this deficiency. Accordingly, the dependent claims 10, 14, 24, 28, 38 and 42 are also nonobvious over the combination of Bertin et al., Chawla et al. and Ellesson et al. based on the nonobviousness of independent claims 1, 15, and 29 over the combination of Bertin et al., Chawla et al., and Ellesson et al.

United States Patent 6,459,682B1 of Ellesson et al. ("Ellesson et al."):

Ellesson et al. disclose an architecture for supporting service level agreements in an IP network, including a method of controlling packet traffic in an IP network of originating, receiving and intermediate nodes to meet performance objectives established by service level agreements. Traffic statistics and performance data such as delay and loss rates relating to traffic flows are collected at intermediate nodes in the Ellesson et al. system. A control server processes the collected data to determines data flow rates for different priorities of traffic. A static directory node is used by Ellesson et al. to look up inter-node connections and to determine initial traffic classes corresponding to those connections. The rates are combined with the initial traffic classes to define codes for encoding the headers of packets to determine their network priority.

Claims 10, 14, 24, 28, 38 and 42:

As with Bertin et al. and Chawla et al., nowhere in Ellesson et al. is there disclosed or suggested any installing, ***at the future reservation time***, at least one ***internet protocol traffic filter*** in the policy enforcement point, wherein the installing activates the requested reservation of network resources for the destination address on the network, ***wherein the internet protocol traffic filter includes a matching criteria and an action, wherein the matching criteria includes at least one internet protocol network address, and wherein the matching criteria allows the policy enforcement point to identify at least one packet and to perform the action on the packet,*** as in the present independent claims 1, 15 and 29, from which claims 10, 14, 24, 28, 38 and 42 each depend. The shortcomings of Bertin et al. and Chawla et al. in this regard are discussed above. While Ellesson et al. does provide teachings regarding the general determination of initial traffic classes corresponding to connections, those teachings do not address the above cited features of the present independent claims. Moreover, Ellesson et al. includes no reference to installation of a filter of any kind at any time.

Applicants therefore respectfully urge that the combination of Bertin et al., Chawla et al., and Ellesson et al. does not disclose or suggest all the limitations of the present independent claims 1, 15 and 29. The combination of Bertin et al., Chawla et al. and Ellesson et al. accordingly does not support a *prima facie* case of obviousness under 35 U.S.C. 103 with regard to the present independent claims 1, 15 and 29. As to dependent claims 10, 14, 24, 28, 38 and 42, they each depend

from claims 1, 15, and 29, and are respectfully believed to be patentable over the combination of Bertin et al., Chawla et al. and Ellesson et al. for at least the same reasons.

C. The Examiner has failed to establish a *prima facie* case of obviousness under 35 U.S.C. 103(a) in the rejection of dependent claim 47 based on the combination of Bertin et al., Chawla et al., and United States Patent number 6,785,728 of Schneider et al. ("Schneider et al.").

As discussed above, the combination of Bertin et al. with Chawla et al. does not disclose or suggest the claimed limitations of the present independent claim 1, from which claim 47 depends, which include installing, ***at the future reservation time***, at least one ***internet protocol traffic filter*** in the policy enforcement point, wherein the installing activates the requested reservation of network resources for the destination address on the network, ***wherein the internet protocol traffic filter includes a matching criteria and an action, wherein the matching criteria includes at least one internet protocol network address, and wherein the matching criteria allows the policy enforcement point to identify at least one packet and to perform the action on the packet.*** Applicants respectfully urge that the addition of Schneider et al. to Bertin et al. and Chawla et al. does not remedy the deficiency of Bertin et al. and Chawla et al. in this regard.

United States Patent number 6,785,728 of Schneider et al. ("Schneider et al."):

Schneider et al. disclose a scalable access filter that is used together with others like it in a virtual private network to control access by users at client computer systems in the network to information resources provided by servers in the network. Each access filter in the Schneider et al. system uses a local copy of an access control data base to determine whether an information access request made by a user is to be permitted or denied, based on the groups to which the users belong. In column 5, lines 14 through 59 Schneider et al. describe problems with previous access filter systems. In column 23, lines 34 to 53, Schneider et al. teach that user's can be identified by IP addresses for purposes of an access control list. And in column 29, lines 11 through 64, Schneider et al. disclose that ranges of IP addresses can be used to identify users to an access filter.

Claim 47:

While Schneider et al. do disclose that a range of IP addresses is one way to identify users to an access filter, as with Bertin et al. and Chawla et al., nowhere do Schneider et al. disclose or suggest any installing, ***at the future reservation time***, at least one ***internet protocol traffic filter*** in the policy enforcement point, wherein the installing activates the requested reservation of network resources for the destination address on the network, ***wherein the internet protocol traffic filter includes a matching criteria and an action, wherein the matching criteria includes at least one internet protocol network***

address, and wherein the matching criteria allows the policy enforcement point to identify at least one packet and to perform the action on the packet, as in the present independent claim 1, from which claim 47 depends. Applicants therefore respectfully urge that the combination of Bertin et al. and Chawla et al. with Schneider et al. does not disclose or suggest all the limitations of the present independent claim 1, from which dependent claim 47 depends.

The combination of Bertin et al. and Chawla et al. with Schneider et al. accordingly does not support a *prima facie* case of obviousness under 35 U.S.C. 103 with regard to the present independent claim 1, and dependent claim 47 is respectfully believed to be patentable over the combination of Bertin et al. and Chawla et al. with Schneider et al. for at least the same reasons.

VIII. Conclusion

Appellants submit therefore that the rejections of the present claims under 35 U.S.C. and 103, based on Bertin et al., Chawla et al., Ellesson et al., and Schneider et al. are improper for at least the reasons set forth above. Appellants accordingly request that the rejections be withdrawn and the pending claims be allowed.

Respectfully submitted,

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Appendix A - Claims

1. (previously presented) A method of allocating resources on a network, comprising:

receiving a request for reservation of network resources, the reservation including a destination address on the network and a future activation time at which the resources are to be activated; and

allocating resources on network devices on a path to the destination address to accommodate the reservation if the network devices have sufficient resources to accommodate the reservation, wherein the allocating is at the future activation time, and wherein the allocating includes communicating over the network at the future activation time with at least one policy enforcement point, wherein the policy enforcement point is on the path and at an edge of the network, wherein the communicating includes configuring the at least one policy enforcement point by installing, at the future activation time, at least one internet protocol traffic filter in the policy enforcement point, wherein the installing activates the requested reservation of network resources for the destination address on the network, wherein the internet protocol traffic filter includes a matching criteria and an action, wherein the matching criteria includes at least one internet protocol network address, and wherein the matching criteria allows the policy enforcement point to identify at least one packet and to perform the action on the packet.

2. (original) The method of claim 1, further comprising determining if the network devices on the path to the destination address have sufficient resources to accommodate the reservation.

3. (original) The method of claim 2, further comprising:

constructing a map of a topology of the network; and storing the map in memory; wherein determining and allocating are performed by referencing the map.

4. (original) The method of claim 3, wherein constructing is performed periodically to account for changes in the topology of the network.

5. (previously presented) The method of claim 1, further comprising:

determining if the reservation is permitted based on an identity of a transferor; and

wherein allocating is performed if it is determined that the reservation is permitted.

6. (original) The method of claim 5, wherein allocating is not performed if it is determined that the reservation is not permitted.

7. (canceled)

8. (canceled)

9. (original) The method of claim 1, wherein allocating comprises allocating resources on the network devices for different classes of service on the network.

10. (original) The method of claim 9, wherein the different classes of service are defined in data packets to be transmitted over the network.

11. (original) The method of claim 1, wherein the resources comprise bandwidth of devices on the network.

12. (original) The method of claim 1, further comprising determining if the destination address is along a path having greater than a predetermined amount of bandwidth;

wherein allocating is performed based on the determining.

13. (canceled)

14. (previously presented) The method of claim 1, wherein the communicating over the network with the at least one policy enforcement point at the activation time takes place using the COPS/RSVP protocol.

15. (previously presented) A computer program stored on a computer-readable medium for allocating resources on a network, the computer program comprising instructions that cause a computer to:

receive a request for reservation of network resources, the reservation including a destination address on the network and a future activation time at which the resources are to be activated; and

allocate resources on network devices on a path to the destination address at the future activation time to accommodate the reservation if the network devices have sufficient resources to accommodate the reservation, by communicating over the network at the future activation time with at least one policy enforcement point, wherein the policy enforcement point is on the path and at an edge of the network, wherein the communicating includes configuring the at least one policy enforcement point by installing, at the future reservation time, at least one internet protocol traffic filter in the policy enforcement point, wherein the installing activates the requested reservation of network resources for the destination address on the network, wherein the internet protocol traffic filter includes a matching criteria and an action, wherein the matching criteria includes at least one internet protocol network address, and wherein the matching criteria allows the policy enforcement point to identify at least one packet and to perform the action on the packet.

16. (original) The computer program of claim 15, further comprising instructions that cause the computer to determine if the network devices on the path to the destination address have sufficient resources to accommodate the reservation.

17. (original) The computer program of claim 16, further comprising

instructions that cause the computer to:

construct a map of a topology of the network; and store the map in memory;

wherein determining and allocating are performed by referencing the map.

18. (original) The computer program of claim 17, wherein constructing is performed

periodically to account for changes in the topology of the network.

19. (original) The computer program of claim 15, further comprising instructions that cause the computer to:

determine if the reservation is permitted based on an identity of a transferor;

wherein allocating is performed if it is determined that the reservation is permitted.

20. (original) The computer program of claim 19, wherein allocating is not performed if it is determined that the reservation is not permitted.

21. (canceled)

22. (canceled)

23. (original) The computer program of claim 15, wherein allocating comprises allocating resources on the network devices for different classes of service on the network.

24. (original) The computer program of claim 23, wherein the different classes of service are defined in data packets to be transmitted over the network.

25. (original) The computer program of claim 15, wherein the resources comprise bandwidth of devices on the network.

26. (original) The computer program of claim 15, further comprising instructions that cause the computer to determine if the destination address is along a path having greater than a predetermined amount of bandwidth wherein allocating is performed based on the determining.

27. (canceled)

28. (previously presented) The computer program of claim 15, wherein the communicating over the network with the at least one policy enforcement point at the activation time takes place using the COPS/RSVP protocol.

29. (previously presented) An apparatus for allocating resources on a network, the apparatus comprising:

a memory which stores executable instructions;

and a processor which executes the instructions to:

receive a request for reservation of network resources, the reservation including a destination address on the network and a future activation time at which the resources are to be activated; and

allocate resources on network devices on a path to the destination address at the future activation time to accommodate the reservation if the network devices have sufficient resources to accommodate the reservation, by communicating over the network at the future activation time with at least one policy enforcement point, wherein the policy enforcement point is on the path and at an edge of the network, wherein the communicating includes configuring the at least one policy enforcement point by installing, at the future reservation time, at least one internet protocol traffic filter in the policy enforcement point, wherein the installing activates the requested reservation of network resources for the destination address on the network, wherein the internet protocol traffic filter includes a matching criteria and an action, wherein the matching criteria includes at least one internet protocol network address, and wherein the matching criteria allows the policy enforcement point to identify at least one packet and to perform the action on the packet.

30. (original) The apparatus of claim 29, wherein the processor executes instructions to determine if the network devices on the path to the destination address have sufficient resources to accommodate the reservation.

31. (original) The apparatus of claim 30, wherein the processor executes instructions to:

construct a map of a topology of the network; and

store the map in memory wherein determining and allocating are performed by referencing the map.

32. (original) The apparatus of claim 31, wherein constructing is performed periodically to account for changes in the topology of the network.

33. (original) The apparatus of claim 29, wherein:

the processor executes instructions to determine if the reservation is permitted based on an identity of a transferor; and

allocating is performed if it is determined that the reservation is permitted.

34. (original) The apparatus of claim 33, wherein allocating is not performed if it is determined that the reservation is not permitted.

35. (canceled)

36. (canceled)

37. (original) The apparatus of claim 29, wherein allocating comprises allocating resources on the network devices for different classes of service on the network.

38. (original) The apparatus of claim 37, wherein the different classes of service are defined in data packets to be transmitted over the network.

39. (original) The apparatus of claim 29, wherein the resources comprise bandwidth of devices on the network.

40. (original) The apparatus of claim 29, wherein:

the processor executes instructions to determine if the destination address is along a path having greater than a predetermined amount of bandwidth; and

allocating is performed based on a determination made by the processor.

41. (canceled)

42. (previously presented) The apparatus of claim 29, wherein the communicating over the network at the activation time with the at least one policy enforcement point takes place using the COPS/RSVP protocol.

43. (previously presented) An apparatus for allocating resources on a network, comprising:

means for receiving a request for reservation of network resources, the reservation including a destination address on the network and a future activation time at which the resources are to be activated; and

means for allocating resources on network devices on a path to the destination address at the future activation time to accommodate the reservation if the network devices have sufficient resources to accommodate the reservation, and wherein the allocating includes communicating over the network at the future activation time with at least one policy enforcement point, wherein the policy enforcement point is on the path and at an edge of the network, wherein the communicating includes means for configuring the at least one policy enforcement point by installing at least one internet protocol traffic filter in the policy enforcement point, wherein the installing activates the requested reservation of network resources for the destination address on the network, wherein the internet protocol traffic filter includes a matching criteria and an action, wherein the matching criteria includes at least one internet protocol network address, and wherein the matching criteria allows the policy enforcement point to identify at least one packet and to perform the action on the packet.

44. (previously presented) The method of claim 1, wherein the action performed by the policy enforcement point comprises marking a packet header of the packet to assign a predetermined priority to the packet.

45. (previously presented) The method of claim 1, wherein the action performed by the

policy enforcement point comprises shaping the packet.

46. (previously presented) The method of claim 1, wherein the action performed by the policy enforcement point comprises dropping the packet.

47. (previously presented) The method of claim 1, further comprising modifying the matching criteria of the internet protocol traffic filter by replacing the at least one internet protocol network address with a range of internet protocol network addresses.

Appendix B - Evidence Submitted

None.

Appendix C - Related Proceedings

None.